

NOTES ON AUSTRALIAN TENEBRIONIDÆ, WITH
DESCRIPTIONS OF NEW SPECIES.

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CESTRINUS TUBERCULATUS, n. sp.

Rather widely oval; opaque brownish-black above and below; antennæ, palpi, and tarsi red.

Head densely rugosely asperate, received rather deeply into the prothorax; epistoma short, obliquely rounded at sides, its suture deeply impressed and straight; ocular canthus as wide as the eyes, and not at all impinging on their sides; eyes round and rather prominent; antennæ not, or scarcely, extending to base of prothorax, stout, joint 3 as long as 4-5 combined, 4-8 moniliform, 9 longer than 8 and widened at apex, 10 as wide as long, 11 ovate, larger than preceding. *Prothorax* $2\frac{1}{2} \times 3\frac{1}{2}$ mm., widest at middle, arcuate-emarginate at apex, slightly bisinuate at base; anterior angles produced and acute, posterior subdentate and acute; sides rather widely rounded and sinuate behind, finely serrated anteriorly, coarsely denticulate-serrate posteriorly; disc uneven, densely and coarsely rugosely asperate, with very short bristly hairs; its margins a little explanate but not differentiated from disc, medial line clearly impressed, and two foveate depressions near centre. *Elytra* more convex than usual in the genus, wider than prothorax at base; shoulders rather square, prominent and slightly reflexed; apical declivity somewhat steep, sides sinuate towards apex; disc closely and strongly tuberculate, each tubercle bearing a short sub-recumbent hair; each elytron with four equidistant costæ, besides a sutural costa, composed of closely-placed larger tubercles; the fourth costa, seen from above, giving a finely-serrated outline to the elytra. *Epipleuræ*, abdomen, and legs coarsely punctate; prosternum coarsely vermiculately rugose; flanks of meso- and metasternum with large round punctures; posterior intercoxal process widely rounded; prosternum convex, its process little produced and simple. *Dimensions*— $7\frac{1}{2}$ - $8\frac{1}{2} \times 3\frac{1}{4}$ - $3\frac{3}{4}$ mm.

Hab.—Western Australia: York (Mr. H. Giles), Harvey (the author).

Four specimens were sent me some time ago by Mr. Henry Giles, labelled "York, 1-X.-'08.," and since taken by myself in January, 1914. It is the only other *costate* species besides

C. costatus, Geb.; which is much smaller, lighter in colour, with six costæ on each elytron, and non-tuberculate elytra. Specimens of *costatus* were also sent by Mr. Giles from Mundaring, Western Australia. There is no evident sexual distinction in the specimens. Type in author's collection.

CESTRINUS (ADELODEMUS) EXCISICOLLIS, Cart.

Since describing this species, I have seen two specimens. One from Herr Gebien, labelled "Silver Valley, N. Queensland," is so different that I described it under another name. This insect is smaller than the type, 10×4.3 mm. (the type is 15×6 mm.), is of a darker colour, with a smaller and less angulate excision of the base of prothorax. The second specimen, lately sent from the Melbourne Museum, is labelled "Claudie R., N. Queensland," and is intermediate in size and shape of prothorax between the former two. For the present, therefore, I consider them as conspecific, and the species to be variable in size and, to some degree, in form. The sculpture is indistinct, but the definite features are the same in all three specimens. It is apparently—from analogy—a denizen of the "scrub" or "brush" country, and it is very possible that the *habitat*, *Gippsland* (as given me by Mr. Giles for a specimen sent me for determination), was erroneous. The type was given to me by Mr. C. French without specified locality.

CÆDIUS TUBERCULATUS, n. sp.

Ovate, convex; brownish-black, clothed with short squamose derm.

Head—Epistoma semi-circularly excised in middle, deeply received into the thorax, surface rugose, antennæ very short, joints compact, and very little enlarged at apex. *Prothorax* 1.5×3 mm., semi-circularly emarginate at apex, widest and bisinuate at base; sides rounded and converging without sinuation from base to apex; anterior angles rounded, posterior sub-rectangular; margins somewhat explanate, but not separated or differentiated from the disc; surface rugose and asperate. *Scutellum* not evident. *Elytra* of same width as prothorax at base, ovate, widest behind the middle, margins not visible from above, covered with short close hair; each elytron with three rows of round, slightly raised, flattened tubercles; under-side rugose punctate, legs short, anterior tibiæ curved, widely expanded and clavate at apex, with a wide dentate emargination and some fine serrations on outside edge, other tibiæ straight. *Dimensions*— 6×3.5 mm.

Hab.—Queensland: Townsville (H. Brown).

Readily distinguished from *C. sphaeroides*, Pasc., by the rows of tubercles on the elytra and by its rougher surface. Otherwise in size and form the two species are very similar. Type in author's collection.

BYRSAX COXI, n. sp.

Oblong, convex; reddish-brown, antennæ and tarsi red, upper-surface clothed with short tomentum.

Head with two nearly straight, diverging horns, finely serrated at base on the inside, on apical half on the outside edge; antennæ short, apical four joints strongly transverse. *Prothorax* sharply raised in middle, with two prominently-raised branching tubercles on middle anterior, two large tubercles behind these, and other smaller conical tubercles irregularly scattered on disc; margins wide, their edges deeply toothed. *Elytra* of same width as prothorax at base; humeri prominent toothed and advanced, the edges finely and closely dentate throughout; margins rather wide in front, obsolete at apex; seriate punctate, the series close, the punctures large and round, the intervals with conical tubercles irregularly placed. Under-side rugose punctate. *Dimensions*— 5×2.5 mm.

Hab.—Sydney (H. Cox).

A single male was generously given me by its discoverer, and differs from *B. pinnaticollis*, Cart., in its narrower form, straight horns, larger elytral punctures, and its dentate not crenulate sides of prothorax and elytra. Type in author's collection.

PTEROHELÆUS DENTICOLLIS, n. sp.

Elongate, subparallel, depressed; black, moderately nitid; palpi, antennæ, and tarsi piceous-red.

Head—Labrum emarginate; epistoma truncate with corners rounded, forming a sinuous curve with canthus; suture limited to two oblique impressions at the sides; space between eyes about the length of third antennal joint; rather finely punctured, with three larger punctures on forehead; antennæ robust, just reaching base of prothorax; joints 3-6 obconic, 3 as long as 4-5 combined, 7-11 gradually enlarged, the three penultimate transversely oval, 11 as long as wide. *Prothorax* 5×10 mm. (length measured in the middle), widest near base, arcuate-emarginate at apex, the anterior angles strongly produced outwards into an acute tooth; sides sinuate behind tooth, then arcuately widening till near the posterior angle, this forming a short acute tooth produced backward; base bisinuate; lateral margins widely explanate, extreme border narrowly reflexed at sides and apex; disc with some large and small punctures irregularly scattered, and five foveate impressions—two lateral elongate, two basal irregular, and a faint

apical central fovea, the medial line apparent on front half. *Scutellum* wide, curvilinear triangular, minutely punctate. *Elytra* $15 \times 11\frac{1}{2}$ mm., less wide than prothorax at base, humeral angles obtuse; sides subparallel on basal half, widening behind, and not at all sinuate at apex; explanate margins narrow throughout with narrowly-reflexed border; each elytron with four equidistant costæ, the last on the sides, besides the subcostate alternate intervals, and seventeen rows (besides a short scutellary row) of large squarely-cut punctures, separated by raised subreticulate intervals; the punctures larger and rounder on sides, smaller and subobsolete at extreme apex. *Abdomen* with basal segments coarsely, the two apical segments minutely punctate, the larger punctures of the former bearing short erect reddish hairs; meso- and metasternum similarly clothed, the prosternum, episterna, and epipleuræ quite smooth, posterior intercoxal process acutely triangular. *Tibiæ* punctate, their interior edge pilose, the front and intermediate tarsi with three, the posterior with two basal joints greatly enlarged, and padded beneath with red tomentum. *Dimensions*— $23 \times 11\frac{1}{2}$ mm.

Hab.—Queensland.

A single specimen, male, in the National Museum, Melbourne, presented by Captain Sumter, is the finest and most easily identified of the group to which it belongs, sect. ii., subsect. i.,⁽¹⁾ by the following characters:—(1) Strongly dentate anterior angles of prothorax (even more so than the very different in other respects *acuticollis*, Macl., or *spinicollis*, Macl.); (2) coarsely punctate elytra (the series contain larger punctures than in any *Pterohelæus* known to me, and these so closely packed as to be contiguous except for the raised intervals); (3) the abnormally-enlarged basal-joints of the tarsi (it is a pity that a female specimen is not at hand to see how far this is merely sexual; I have seen nothing like it in the whole genus).

PTEROHELÆUS RUBESCENS, n. sp.

Ovate, more than usually convex; dark reddish-brown above, with a primrose bloom; palpi and tarsi a shade lighter; underside a shade darker.

Head closely and clearly punctate; labrum prominent; epistoma straight in front, sides oblique, raised and continuous with canthus; tumid and convex anteriorly, depressed on forehead; the separating suture arcuate and distinct; eyes close (separated by a distance equal to the length of the first antennal joint); antennæ not reaching base of prothorax, 3 not as long as 4-5 combined, 8-10 oval not transverse, 11 twice as

(1) Proc. Linn. Soc., N.S.W., 1910, p. 125.

long as 10. *Prothorax* $3\frac{1}{2} \times 8$ mm., arcuate-emarginate at apex; anterior angles advanced but widely rounded, sides arcuately widened to base, posterior angles acute and very slightly produced; base bisinuate, explanate margins wide and concave, extreme border narrowly raised on sides and apex; disc very convex, closely and clearly punctate; medial line rather deeply impressed and terminating apically in a triangular depression; two large and deeply-impressed basal foveæ, and two more irregular foveæ at the anterior corners. *Scutellum* transverse, curvilinear triangular, raised in middle, foveate on each side. *Elytra* ovate, very convex, wider than prothorax at base, humeral angle obtuse, horizontal margins wide for the greater part, rather abruptly narrowed towards apex; disc very gibbous in humeral region; each elytron with seventeen rows, besides a short scutellary row, of large round punctures, closely placed, the lateral row larger than the rest, the punctures becoming smaller towards suture and apex, also some confused punctures at base; all intervals slightly convex, the fifth and ninth wider than the rest, the former costate on the basal two-thirds; epipleuræ very concave, with a crenulate sulcus running throughout its middle. *Abdomen* strongly strigose-punctate; metasternum finely punctate; prosternum rugose. *Dimensions*— $15\text{-}16 \times 9\text{-}10$ mm.

Hab.—South Queensland: Tambourine Mountain (the author); Blackbutt (R. J. Tillyard).

Two specimens, the sexes, under examination. The strong convexity, colour, and bloom on a fresh specimen gives it the superficial appearance of *Encara nigrum*, Cart. It belongs to sect. ii., sub-sect. iii., of my table (near *sternalis*, Cart., *confusus*, Macl.), and can be distinguished from its allies by the following combination:—(1) Colour (when the bloom is removed) nitid dark-brown with a reddish tinge; (2) great convexity; (3) crowded state of the punctures both longitudinally and transversely, with the comparatively large size of the individual punctures (between four punctures in two adjacent series there would be only room for a single puncture); (4) the convexity of the interstices and the marked width and convexity of the fifth interval; (5) nonpustulose metasternum.

PTEROHELÆUS CYLINDRICUS, n. sp.

Elongate-parallel, very convex laterally; black, moderately nitid; antennæ and tarsi red; tarsi and tibiæ thickly clothed with golden tomentum.

Head—Epistoma wide, rounded and reflexed in front and sides, its curve continuous with the canthus, its suture only indicated by oblique lines at the sides; sparsely punctate; eyes separated by a distance less than the diameter of one; antennæ

not reaching the base of prothorax, gradually widening to apex; joint 3 shorter than 4-5 combined, 5-8 obconic, 9-11 oval. *Prothorax* 4.5 × 9 mm. (length measured in middle), widest at base, arcuate-emarginate at apex, bisinuate at base; anterior angles very widely rounded, sides arcuately diverging to base, posterior angles very acute and produced; explanate margins wide, concave in front, not separated or differentiated from disc; the latter very minutely, not closely punctate, with a faint depressed medial line. *Scutellum* large, triangular, distinctly punctate. *Elytra* as wide as prothorax at base and about three and a quarter times as long, parallel, subcylindric, becoming more convex apically; lateral margin very narrow, but of uniform width throughout; humeral angle obtuse and clearly defined, extreme border nitid and reflexed; seriate-punctate, with eighteen rows of punctures, rather larger and more distant than in *P. planus*, Bless., the rows tending to become confused and obliterated at base, and obsolete at apex; intervals flat on the middle, the alternate intervals beginning with the ninth variably and slightly convex, a depression on each side at the base, and (in one example) depressed behind the scutellum; prosternum carinate and together with the sides of metasternum slightly granulose. *Abdomen* striolate; *tibiæ* coarsely punctate. *Dimensions*—18-21 × 8.5-9.5 mm.

Hab.—Queensland: Marmor (H. W. Brown).

Mr. Brown took a number of this species at Marmor. It belongs to sect. ii. of my table,⁽²⁾ and should be placed near *elongatus*, Macl., which differs markedly in having all its alternate intervals sharply costate and the seriate punctures very large. Type in author's collection.

PTEROHELÆUS OPACUS, n. sp.

Elongate, subparallel, convex; opaque-black above, nitid beneath; antennæ and tarsi red, the latter and the tibiæ clothed with bright-red tomentum.

Head very wide across the middle; epistoma widely arcuate, and continuous with the rounded and strongly-raised canthus; depressed below the level of the forehead and separated from it by an arcuate suture; surface strongly punctate; eyes separated by a distance equal to the diameter of one; antennæ rather long and stout, extending to the base of prothorax, joint 3 shorter than 4-5 combined, cylindric, 4-8 obconic, 9-10 nearly round, 11 oblong ovate. *Prothorax* 5.5 × 9 mm., widest at base, arcuate-emarginate at apex; anterior angles widely rounded, bisinuate at base, posterior angles widely acute, scarcely produced, sides arcuately diverging to

(2) Proc. Linn. Soc., N.S.W., 1910, p. 125.

base; explanate margins wide and horizontal, extreme border narrow and not raised, the whole densely and rather coarsely punctate, a central depression scarcely indicated. *Scutellum* transversely triangular, densely punctate. *Elytra* as wide as prothorax at base and two and a half times as long, widest at base, and very gradually narrowing hindwards, moderately convex, lateral declivity from the suture pronounced, shoulders slightly reflexed and obtusely angulate, horizontal margins moderately wide and continuous to the apex, each elytron separately rounded there; seriate-punctate, with about eighteen rows of moderate punctures placed at a distance of the diameter of one (their size intermediate between those of *cylindricus* and *elongatus*, Macl.), the alternate intervals subcostate (much less so than in *P. elongatus*), the punctures becoming confused and irregular at base, and obliterated at apex, a smooth space on each side of suture. Submentum rugose, prosternum coarsely transversely rugose, metasternum pustulose. *Abdomen* and *legs* rather coarsely and closely punctate; anterior tarsi very wide. *Dimensions*—19 × 9 mm.

Hab.—Queensland: Rockhampton (Captain Sumter).

A single specimen, male, in the Australian Museum, Sydney, is another ally of *P. elongatus*, Macl., but differs in having a strongly punctate pronotum, its alternate intervals less sharply costate, and its tapering form *inter multa alia*. Type in Australian Museum, Sydney.

PTEROHELÆUS VESTITUS, n. sp.

Shortly ovate; cinnamon-brown; the whole surface above and beneath clothed with pale-reddish recumbent hair; tarsi and antennæ red.

Head—Epistoma short, rounded, its suture straight and finely marked; eyes small, widely separated; antennæ short, the last four joints enlarged. *Prothorax* 2 × 4 mm., semi-circularly-emarginate; the acute anterior angles extending in front of the eyes, base strongly bisinuate, posterior angles produced backwards and rather widely acute; sides evenly rounded, explanate margins wide and horizontal; disc minutely punctate, the punctures obscured by the short hairy clothing; a smooth medial line indicated. *Scutellum* curvilinear-triangular. *Elytra* as wide as prothorax at base and three times as long, ovate and convex, striate-punctate, the striæ well defined, the punctures therein small and close, intervals flat, minutely setose-punctate. Sternum punctate, legs punctate-setose, fore tibiæ rather wide. *Dimensions*—8.5-9 × 4.5-5 mm.

Hab.—South Australia: Flinders Range (Australian Museum, Sydney).

Two specimens in the Australian Museum, Sydney, belong to sub-sect. iv., as tabulated,⁽⁵⁾ and come nearest to *P. thymeloides*, Macl., which is a more oval and convex insect. Type in Australian Museum, Sydney.

HELÆUS BIMARGINATUS, n. sp.

Elongate-ovate; opaque-brown; sparsely clothed with short scaly hairs of a rusty-red colour; legs and tarsi more densely but similarly clad.

Head setose, with a few large punctures; a transverse sulcus in front of the eyes, the latter approximate and nearly concealed by prothorax; antennæ, with joint 3 as long as 4-5-6 combined, 4-7 obconic, 8 triangular, 9-10 very transverse, 11 nearly round. *Prothorax* 8.5 × 12 mm., the anterior process wide but pointed, not meeting at apex, widest and bisinuate at base, sides evenly and arcuately converging to apex, explanate margins wide and oblique, its extreme edge, viewed sideways, laminate, posterior angles acute; surface setose and finely pustulose with raised nitid central carina, faintly undulate in outline, raised and rostrate behind; not quite extending to the anterior margin. *Scutellum* transversely triangular. *Elytra* of same width as prothorax at base, subparallel on anterior half, widely rounded behind; humeral angle obtuse and prominent; margins strongly reflexed and vertical, following the humeral angle at base as far as the lateral row of pustules, the apical half of margin branching and duplicated to the apex, this double border irregularly crenulate and separated by a sulcus, but uniting again at a somewhat nodulose apex; the edges of elytra, viewed sideways, vertical, with a crenulate margin above and below (the lower formed by the epipleural fold), this vertical edge gradually widening towards apex, from less than $\frac{1}{2}$ mm. at the shoulders to nearly 2 mm. at the apex; the whole margin strongly upturned with a wide concavity within, this concavity deepest and most marked at apex; disc bicostate with two slightly crenulate and nitid costæ, diverging at but not quite reaching base, parallel on anterior two-thirds, converging on apical declivity, again parallel and continuous almost to extreme apex, there terminating in a raised acute tooth; a lateral row of conical pustules, distinct and separated, extending from the humeral region to apex. *Under-side* roughly shagreened, setose with patches of red indumentum, epipleuræ nearly smooth, prosternum rugose, with a central carina and anterior margin subnodulose. *Dimensions*—23 × 12.5 mm.

Hab.—Western Australia: Lake Austin (H. Brown).

(5) Proc. Linn. Soc., N.S.W., 1911, p. 180.

Very like *H. derbyensis*, Macl., in colour, shape, and integument, but differing in some remarkable characters, of which the following are the most striking:—(1) Duplicated margin of elytra; (2) vertical lateral edge of elytra greatly increasing in width from shoulders to apex; (3) elytral costæ almost continuous from base to apex, terminating in prominently raised tooth (in all the other bicostate species these costæ terminate abruptly or gradually merge into the general surface); (4) the pronounced concavity within the lateral margins, and much exaggerated—almost spoon-like—at apex. Type in author's collection.

HELÆUS CYCLIFORMIS, n. sp.

Very widely ovate, strongly convex; opaque brownish-black; sparsely clothed above and beneath with squamose clothing of a rusty-red colour.

Head—Epistoma limited behind by straight impression; surface mostly concealed by derm, scarcely punctate; eyes small, transverse, and almost concealed by prothorax; antennæ with joint 3 as long as 4-5-6 combined, apical four joints transverse and rounded. *Prothorax* 6 × 12 mm., widest at base; anterior processes sharp, grooved above (falcate), not quite meeting in front, sinuate at their junction with the widely-rounded sides, posterior angles very acute and slightly overlapping the elytra, base bisinuate; foliate margins wide, flat behind, becoming concave in front, extreme border reflexed and thin (viewed sideways), slightly rounded and continuous with the under-surface; disc finely shagreened and squamose in patches, a thin lightly-raised central carina, obsolete at apex, raised towards the base with a blunt subconical erection (in the female specimen more raised and defined than in the male). *Scutellum* very transverse. *Elytra* 12 × 14 mm., wider than prothorax at base, convex, shoulders rounded, widest behind middle; surface rough, with shallow setose punctures, bearing short red hairs, a row of large punctures in a lateral sulcus; explanate margins wide in front, narrowed at apex, extreme border reflexed (viewed sideways), narrowly convex and not continuous with under-surface; bicostate, with two subparallel costæ, diverging at but continuous to base, abruptly terminated at the apical declivity, the suture also carinate throughout. *Under-surface* finely shagreened and squamose; prosternum finely rugose, not carinate. *Hind tibiæ* with short, close hairs; all tibiæ with two long apical spines. *Dimensions*—16-17 × 13-14 mm.

Hab.—Western Australia: Lake Austin (H. W. Brown).

While standing nearest to *H. perroni*, Bois., in my table,⁽⁴⁾ it is a much larger, wider, and more convex insect, with a smoother surface. Its general form is nearer that of *Sympetes orbicularis*, Brême. Type in author's collection.

SARAGUS SUBSTRIATUS, n. sp.

Ovate; opaque brownish-black; antennæ and tarsi piceous.

Head—Epistoma rounded, reflexed, but not angulate at sides, the limiting suture arcuate, subobsolete in the middle, very minutely punctate, eyes widely separated, antennæ moderately enlarged at apex, joint 3 as long as 4-5 combined, 4-7 obconic, 8-10 nearly round, 11 oval. *Prothorax* 4 × 9 mm., widest at base, arcuate-emarginate at apex; anterior angles widely rounded, base strongly bisinuate, posterior angles acute and strongly produced; sides arcuately widened to base; explanate margins wide, subhorizontal, lateral reflexed border very thin; disc smooth, with a faint central depressed line. *Scutellum* transverse, triangular. *Elytra* as wide as prothorax at base, ovate and convex, shoulders obsolete, horizontal lateral margin moderately wide, but narrowed at apex, extreme border narrowly reflexed; with seventeen thin, somewhat erratic, lines of small punctures, forming here and there distinct striæ; the seventeenth, or lateral, row containing large punctures continuous to the apex; the other rows becoming obliterated at base and apex, and a little irregular at base; intervals everywhere quite flat, the first, fifth, ninth, and thirteenth distinctly wider than the rest; prosternum convex, faintly granulose at sides; metasternum finely rugose. *Abdomen* finely and densely striolate, epipleuræ smooth. *Dimensions*—17 × 10 mm.

Hab.—Upper Hunter.

A single specimen (female [?]) in the Australian Museum, Sydney, is intermediate in form and sculpture between *lævis*, Macl., and *geminatus*, Macl. From the former it can be distinguished by (1) the distinct lines of punctures on the elytra, and (2) the horizontal explanate margins of prothorax with thin border. From *geminatus*, Macl., it is separated by its quite flat elytral intervals. I found *S. geminatus*, Macl., very common at Guyra, New South Wales, in December, 1910. Its locality is also given as "Upper Hunter" by Macleay. Type in Australian Museum, Sydney.

ONOSTERRHUS KENNEDYI, n. sp.

Widely obovate, very convex; brown, with patches of short squamose clothing.

(4) Proc. Linn. Soc., N.S.W., 1910, p. 94.

Head—Labrum emarginate and ciliate; mandibles bifid at apex; epistoma truncate, squarely rounded at sides, meeting the canthus at an obtuse angle, foveately impressed within the angles; suture wide, rugosely impressed; canthus elongate and slightly raised, surface clothed with rough derm; antennæ reaching base of prothorax, robust, scarcely thickened outwardly, joint 3 as long as 4-5 combined, 8-10 round, 11 twice as long and wider than 10. *Prothorax* 6 × 9 mm., widely emarginate at apex, wider at base than at apex, widest in the middle; anterior angles produced and rather acutely rounded, sides widely rounded, sinuate behind; posterior angles acute, bluntly dentate; base truncate; lateral margins widely horizontal, slightly wrinkled, extreme border thin, not raised; disc very gibbous, and beneath the derm strongly punctate, with a more or less smooth medial line raised anteriorly. *Scutellum* very transverse and thin. *Elytra* 13 × 11 mm., very convex and obovate, shoulders widely rounded, epipleural fold forming a narrow reflexed border, depressed at suture, with three slightly raised, smooth, rounded costæ, the middle one shorter than the others, the intervals irregularly and sparsely reticulated and punctate, the punctures large, shallow, and more or less in lines, these lines distinct on each side of the costæ. *Abdomen* strigose and with the femora finely punctate; prosternum transversely rugose, its process bluntly rounded at apex; epipleuræ smooth, submentum scarcely dentate, anterior and posterior tarsi wanting or incomplete. *Dimensions*—20 × 11 mm.

Hab.—Eastern Australia (New South Wales or Queensland).

A single veteran (sex ?) in the Australian Museum, Sydney, labelled "Kennedy expedition," probably from Warrego River district, is a somewhat close ally of *O. squamosus*, Cart., but may be readily distinguished by the following differences:—(1) Pronotum with much wider and more horizontal margins, and less thickened border (seen sideways this is round and rope-like in *squamosus*, but thin and lamellate in *kennedyi*); (2) the sharper and more produced angles of thorax; (3) obovate elytra (in *squamosus* ovate); (4) much stronger sculpture of pronotum and elytra, the former also much more gibbous. Type in Australian Museum, Sydney.

ÆTHALIDES STEPHENI, n. sp.

Oval; dull black above, more nitid beneath; four apical joints of antennæ ferruginous.

Head densely punctate; labrum prominent and rounded at sides; epistoma truncate, its surface concave, with sides oblique and almost continuous with the canthus, the latter little raised,

the separating suture arcuate and clearly defined, forehead convex, less strongly punctate than, but equally densely as, the epistoma; antennæ with joint 3 as long as 4-5 combined, 4-7 obconic, 8-10 elongate-ovate, 11 ovate-acuminate. *Prothorax* $4\frac{1}{4} \times 7\frac{1}{4}$ mm., widest at middle, arcuate at apex, feebly bisinuate at base, wider at base than at apex, sides moderately and evenly rounded, slightly sinuate at hind angles, anterior angles subrectangular and scarcely produced, posterior acute, dentate, and pointing obliquely outwards; lateral border strongly thickened and round, produced but narrowed and abruptly ending on anterior part of front angle, rather widely channelled inside this border; disc very densely and finely punctate, like the forehead, with two faint foveate impressions on centre of disc, and some equally faint transverse impressions near base. *Scutellum* very transversely triangular. *Elytra* of same width as elytra at base, shoulders widely rounded, slightly obovate, with narrow horizontal margin and reflexed border, each elytron with four wide and little raised costæ, besides the sutural costa, the fourth separated from the margin by a row of large punctures, intervals vermiculately rugose and strongly punctate, the punctures uneven in size and sometimes—as at the suture—in a lineal formation, the costæ somewhat crenulate from the large, but irregular, punctures at their sides. The whole under-side finely and closely punctate, prosternal process produced, channelled down its middle, but not bifid at apex; mesosternal notch triangular; posterior intercoxal process widely circular, its border raised; submentum widely notched in the middle, and with a small flat tooth pointing forwards. *Dimensions*— 18×9 mm.

Hab.—New South Wales: Howell (Inverell district).

A specimen sent me by Mr. J. F. Stephen, to whom I dedicate it, differs from *Æ. marginipennis*, Cart., in its more even and densely punctate head and prothorax, the longer third joint and lighter colour of antennæ, the wider anterior angles of prothorax, its thicker border, more dentate hind angles, the elytral costæ more defined, etc. It is much further removed from all the other species of the genus. Type in author's collection.

ÆTHALIDES COXI, n. sp.

Widely ovate; nitid-black above, rather dull black beneath.

Head very similar to *Æ. stephensi*, except in the following particulars:—Epistomal suture straight, its surface more horizontal; canthus more raised and strongly furrowed within; punctures more widely separated; forehead more rigid

between the eyes; antennæ black, joints 9 and 10 distinctly shorter, 11 oval not pointed at apex. *Prothorax* 5 × 8 mm., differs from *stepheni* as follows:—Nitid, less densely punctate surface, anterior angles more widely lobate and acute (though slightly rounded at apex), sides much more widely rounded and more abruptly sinuate behind, the marginal channel wider and more pronounced (the thickened border appearing broken or subangulate on the inside at its widest part), two discal foveæ more pronounced, base indented near angles, posterior tooth less outwardly directed. *Elytra* much more widely ovate, widest in the middle, its costæ much more sharply raised and more crenulate; the vermiculate transverse intervals much more coarsely impressed and nitid; the punctures less defined, and more obscured by the irregular rugosity, the lateral row of punctures less distinct and regular. Apical segments of *abdomen* punctate, basal segments strongly striolate; prosternum punctate, its flanks nearly smooth, its process not channelled, its apex more rounded than in *stepheni*; submentum nearly truncate in middle, unnotched, the lateral tooth almost as in *Onosterrhus*, much larger and more prominent than in *stepheni*. *Dimensions*—18 × 10 mm.

Hab.—New South Wales: Wollomombi (New England district) (H. Cox).

A single specimen, sex doubtful (front tarsi wanting), generously presented by its discoverer, differs from *stepheni*, as above. Its coarser sculpture, wider form, suggest an approach to *Nyctozoilus*, but the prothorax is very like that of the preceding species, and also like that of some of the larger species of *Onosterrhus* in its apparently nearly smooth surface and thickly-rounded lateral border. The upper-surface of both the above species is finely but distinctly punctured, in *stepheni* the punctuation is exceptionally dense, while in *coxi* it is more distant and distinct (no doubt owing to its nitid surface). Type in author's collection.

STYRUS REVOLUTUS, n. sp.

Elongate-ovate; dull black, tarsi piceous, clothed below with golden tomentum.

Head densely and evenly punctate; labrum square and protuberant; epistoma straight in front, subrectangular (slightly rounded) at sides, limiting suture deeply impressed; the epistoma forming an angle with the strongly-raised canthus; antennæ extending beyond the prothorax and setose, joint 3 not quite as long as the next three combined, 8-10 rather squarely oval, 11 much longer than 10 elongate-ovate. *Prothorax* 5 × 6 mm. (length measured in middle), widest

behind the middle, much wider at base than at apex; anterior angles strongly produced, acute and twisted; sides sinuate in front; moderately widened behind middle, again converging to the obtuse posterior angle; margins strongly thickened and raised almost vertically, concave within; apical and basal margins narrow; disc closely set with moderately large punctures, and two foveæ near the centre, with no indication of a middle line. *Scutellum* widely triangular, coarsely punctate. *Elytra* ovate and convex, of same width as prothorax at base and twice as long, shoulders rounded; sides widening to behind the middle, then rather rapidly converging, but separately rounded at apex; each elytron with three (besides a short scutellary one) shining, wavy costæ, the scutellary costa meeting the next at base, the second also continuous to the base, the third terminating on the shoulder; with irregular transverse vermiculate ridges; the suture also slightly raised and, with the costæ and ridges, distinctly punctate, the interspaces and depressions with punctures of unequal size. Whole *under-side* and *legs* densely and rather coarsely punctate, the punctures largest on the meso- and metasternum, finest (but very distinct) on the epipleuræ and legs; prosternum evenly convex, its process rounded at apex. *Dimensions*—17 × 8 mm.

Hab.—Queensland: Marmor district (?) (H. Brown).

A single specimen given me by its captor differs from the other species markedly in its entire, thickened, and strongly revolute margins to prothorax, with its surface more finely punctured, its truncate base without any dentation or sinuation, its thicker elytral costæ (themselves distinctly punctate). The form of the prothorax is somewhat as in *Byallius reticulatus*, Pasc., but the margins are much thicker, the anterior angles more prominent, and the body is more convex than in *Byallius*.

ONONYCTUS, n. gen., NYCTOZOILIRARUM.

Head and thorax as in *Byallius*; mandibles bifid, mentum cordate; labrum emarginate and ciliate, displaying membranous hinge; apical joints of all palpi widely securiform; submentum as in *Nyctozoilus*; intercoxal process widely and rather squarely arched, its border carinate; prosternum convex, its process rather flat, sulcate, and bordered at sides, rounded and very little produced downwards at apex; mesosternum with wide but shallow notch for its reception; epipleuræ narrow, with square foveate impressions; femora smooth; tibiæ without line of tomentum, but scantily and shortly pilose; posterior tarsi wanting; elytra coarsely punctate-sulcate; rest as in *Byallius*.

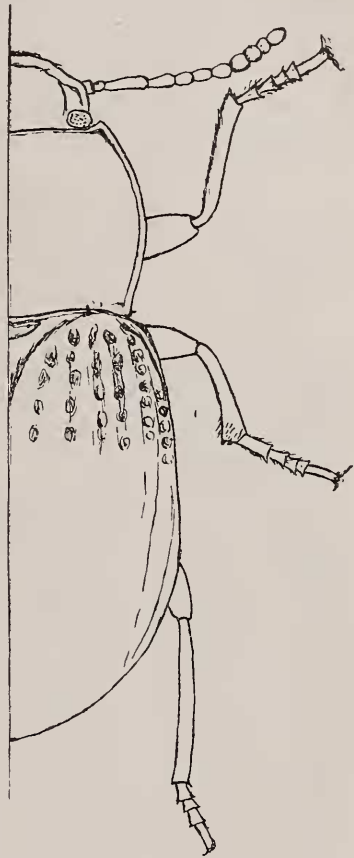
ONONYCTUS SULCATUS, n. sp.

Elongate-ovate; above dull black (elytra rather more nitid than pronotum), under-side and legs nitid-black, apical joints of antennæ piceous-red, tarsi clothed with golden tomentum.

Head distinctly and evenly punctate; epistoma truncate, limited behind by narrow straight furrow, the sides obtusely angulate with canthus, the latter rounded and little raised; eyes transverse, bordered by a wide and rather deep sulcus, this enlarged in front; forehead flat; antennæ extending beyond base of prothorax, joint 3 as long as 4-5 combined, 4-7 obconic, 8-10 short, transverse, and spheroidal, 11 ovoid one and a half times longer than 10. *Prothorax* $5 \times 5\frac{3}{4}$ mm., widest at middle, truncate at apex, with narrow anterior angles moderately produced and subacute (border thickened and apex blunted); sides gently and evenly rounded, sinuate behind; posterior angles slightly produced and subacute; base truncate; lateral border thickened towards apex and base, widely but not deeply channelled within; disc rather convex and smooth, minutely punctate (perceptible only under lens, punctures much smaller than on head), a thin depressed medial line terminating in a shallow depression near base.

Scutellum very transverse. *Elytra* obovate and very convex, twice as long as prothorax, wider than it at base; epipleural fold reflexed and rounded at shoulders; sides ovally widened to near apex,

then abruptly narrowing; apical declivity steep; lateral border and channel narrow, punctate-sulcate with eight rows on each elytron of subfoveate punctures, besides a row of elongate punctures in lateral channel, the seriate punctures separated by transverse and sometimes reticulate septæ, the first seven intervals (including the sutural) forming wide subcrenulate costæ, third and fifth connected on apical declivity, the two sutural costæ bifurcating behind scutellum and forming a triangular excavation with a few (about four) large punctures



ONONYCTUS SULCATUS, n. sp.

therein, the transverse septæ less raised than the costæ, the two outside intervals more indefinitely raised and the reticulation of septæ more pronounced in this part; intervals impunctate. *Abdomen* minutely punctate, its first three segments longitudinally strigose; prosternum transversely strigose. *Legs* rather slender, tibiæ straight. *Dimensions*—17 × 8 mm.

Hab.—New South Wales: Narrabri.

A single specimen, probably male, was given me by my friend, Mr. T. G. Sloane, some years ago. It is labelled "Narrabri, Musson," and has been withheld from description, partly through doubt as to its position and partly in the hope of acquiring more specimens. It is remarkable in exhibiting in its elytral sculpture a transitional form between the punctate-striate and the reticulate, some of its intervals, especially towards the sides, showing distinct reticulation, *i. e.*, two or three punctures (in a network of raised lines) taking the place of a single puncture. Type in author's collection.

ONOTRICHUS MINOR, n. sp.

Widely oval, convex; brownish-black, moderately nitid above, more nitid beneath; antennæ and tarsi reddish, the apical joints of the former paler, the latter clothed with yellow tomentum; whole surface above and below with long, fine, upright hairs.

Head—Labrum emarginate and punctate; epistoma truncate and reflexed in front, making an angle with the canthus, concave behind with scarcely defined sulcus, whole surface coarsely rugose punctate; eyes small and partially concealed by prothorax; antennæ not reaching base of prothorax, apical joints enlarged, joint 3 as long as 4-5 combined, 4-6 obconic, 7 triangular, 8-10 round, 11 ovate. *Prothorax* 4 × 7 mm., widest behind middle, arcuate at apex; anterior angles obtuse, slightly advanced, sides lightly sinuate in front and behind, widely rounded; posterior angles obtuse, scarcely produced; lateral border raised, moderately thickened and punctate, rather widely channelled within; disc without central impression, irregularly covered with round deep punctures, thickest in front, the interspaces densely and finely punctate. *Scutellum* thin and very transverse. *Elytra* wider than prothorax at base, and rather more than twice as long, convex longitudinally and transversely, widest near apex; apical declivity steep, shoulders rounded, narrowly margined, each elytron with three well-raised nitid costæ, crenulated at the sides by rows of punctures: suture almost flat; intervals coarsely, rather closely but irregularly, punctate with slight rugosity in places. *Abdomen* and *femora* coarsely punctate; prosternum rugose-punctate, its process widely arched behind; coxæ coarsely

punctured; *tibiæ* shortly spinose at apex, the front *tibiæ* bowed and coarsely notched on exterior margin. *Dimensions*—11-14 × 6-8 mm.

Hab.—Western Australia: Cue and Lake Austin (H. Brown).

Another interesting discovery of Mr. Horace Brown, who has kindly given me four specimens, two of each sex. The males are larger, with the fore *tibiæ* more bent and notched, and have the basal joints of the front tarsi slightly enlarged. The species differs from *O. lateralis*, Cart., in its (1) much thinner lateral border of prothorax, with shallower channel inside this border, and wider and less produced angles, (2) much coarser puncturation of head and pronotum, and (3) absence of the fourth elytral costa, *inter alia*. Type in author's collection.

BYALLIUS LATICOLLIS, n. sp.

Elongate-ovate; dull black above and beneath, basal joints of antennæ and under-sides of legs nitid, *tibiæ* with a line of golden tomentum, tarsi similarly clothed.

Head—Mandibles bifid, labrum prominent; epistoma truncate in front, angulate with the widely-rounded canthus, its suture arcuate and faintly impressed; forehead convex; whole surface densely and evidently punctate; antennæ not reaching base of thorax, joint 3 as long as 4-5 combined, 8-11 ovate, opaque, and hirsute, 11 larger than 10. *Prothorax* 5 × 8 mm., widest behind middle, very slightly convex, arcuate-emarginate at apex; anterior angles widely acute, blunted at apex and outwardly directed; sides feebly sinuate in front, arcuately widening till near base, then rather abruptly but roundly narrowed to the wide obtuse posterior angles; lateral border very thick and round, terminating at the posterior angle behind, much narrowed at apex (appearing there only as a thin reflexed edge); lateral channel wide and continuous with the disc, the latter closely and finely punctate, the punctures smaller than on head. *Scutellum* very transverse. *Elytra* slightly wider than prothorax at base, widest behind middle, somewhat depressed, epipleural fold not evident at shoulders from above, lateral border very narrow, with the usual line of punctures within it; disc finely reticulate-punctate, a sutural and four other subcostate wavy lines on each elytron, the first two and the last two of the latter connected near apex, the fourth less raised than the rest at the sides. *Abdomen* and *legs* strongly punctate, first two segments of the latter strigose, intercoxal process wide, submentum coarsely, prosternum finely, punctate, its process rounded at apex, bordered and sulcate at sides. *Dimensions*—19½ × 9 mm.

Hab.—New South Wales: Cooma district (Dr. Blackburn).

Dr. E. W. Ferguson has kindly given me a specimen (female) taken by the son of the late Canon Blackburn, which evidently differs from its allies as follows:—From *B. kosciuskoanus*, Cart. (its nearest ally), in wider and more depressed form, more opaque colour, finer punctures on head and thorax, the lateral border of the latter much thicker, anterior angles wider and less acute at apex; from *B. reticulatus*, Pasc., it differs more widely in its finer punctuation of head and thorax, much wider but less reflected lateral border, and in the less raised sculpture (both costæ and reticulation) of the elytra; from *B. ovansensis*, Cart., in its non-dentate posterior angles, *inter multa alia*. Type in author's collection.

PROMETHIS OPACA, n. sp.

♂. Elongate-parallel; opaque-black, apical half of fore tibiæ and under-side of all tarsi clothed with red tomentum, antennæ and palpi reddish.

Head coarsely, unevenly punctate, the punctures largest and less close between the eyes, more finely punctured towards the neck; canthus strongly raised and subcornute, making a distinct angle with the sides of epistoma; antennæ as in *P. angulata*, Erichs. *Prothorax* 5 × 6 mm., considerably widest in front; apex bisinuate, produced in middle; anterior angles forming a rounded lobe, reflexed at border, more produced forward and outward than in *P. angulata*; sides angulately narrowed behind these, again narrowed before the widely obtuse posterior angles, these not at all produced; base bisinuate, with raised lateral and basal border, the former thickened at the anterior angles, obsolete on apex, the latter coarsely punctate; disc coarsely, unevenly, but in general rather closely punctate, the punctures round and deep at centre, the sculpture more obscure and rugose towards sides, medial line wide and deep throughout. *Scutellum* semi-circular, coarsely punctate. *Elytra* wider than prothorax at base and two and a half times as long; sides parallel, more convex than in *P. angulata*; punctate sulcate, with ten rows (including a short scutellary and the extreme lateral row) of large punctures placed in moderately deep sulci; intervals crenulate and strongly raised, under a microscope seen to be minutely punctured and shagreened. *Mentum* fringed, *submentum* very rugose (subpustulose), *sternum* punctate and finely rugose, anterior *coxæ* covered with short reddish hair, three anterior segments of *abdomen* rather closely covered with large round punctures, the apical segments finely punctate; *legs* long, the anterior

tibiæ less curved than usual in the genus, strongly fringed on apical half, mid-tibiæ slightly curved, post-tibiæ straight. *Dimensions*—18-19 × 6-7 mm.

Hab.—New South Wales: Craven (Gloucester district) (T. G. Sloane).

Two male specimens, taken by Mr. Sloane, July, 1914, under Eucalyptus bark, form an undoubted addition to this genus. While nearest *P. angulata*, Erichs., in form and angulated sides of prothorax, it is strikingly differentiated from all *Promethes* having a fringed mentum in the male by its combination of opaque surface, strongly punctate head, prothorax, and abdomen, parallel and sulcate elytra with large seriate punctures, prothorax strongly widened in front, the anterior angles lobate. It is strange that this species has so far been unnoticed, considering the very large number of specimens lately examined by the author. It is probable, therefore, that this species has a limited range in an area so far little explored by the entomologist. Type in author's collection.

DYSTALICA, Pasc.

Three species have been described: *D. homogena*, Pasc.; *D. subpubescens*, Bates, *D. parallela*, Lea; and probably are all the same species. I have eight specimens before me, varying in size, and to some small extent in sculpture, but most of all in the amount of crenulation of the sides of the prothorax (a difference frequently found in the same species in *Seirotana*). My specimens are from the following localities:—1, Swan River (this has been compared with the type of *D. homogena*, Pasc.); 1, Carnarvon, Western Australia; 1, Kookynie, Western Australia; 2, Murchison district, Western Australia; 1, Shark Bay, Western Australia; 1, Cue, Western Australia; 1 from the mallee district, North-west Victoria. The last of these rather more corresponds with the description of *D. subpubescens*, Bates, except in having a faint crenulation to the thoracic border. Bates contradicts Pascoe's statement as to the last joint of the antennæ not being longer than the tenth in both *D. homogena* and *D. subpubescens*.⁽⁵⁾ As this seems to be the chief distinction that Lea mentions in his description of *D. parallela*, I cannot but conclude that *D. parallela*, Lea = *D. homogena*, Pasc., leaving *D. subpubescens*, Bates, for the present under suspicion. Bates' locality of New South Wales seems also open to doubt. I have also examined the specimens (determined by Mr. Lea, and probably co-types) in the Australian and Macleay Museums, labelled "*D. parallela*, Lea."

⁽⁵⁾Trans. Ent. Soc., Lond., 1873, p. 370.

DÆDROSIS, Bates.

Leptogastrus, Macl.

There is no generic distinction between the above two genera. The species described below as *D. apiformis* is a clear link between *D. (Leptogastrus) mastersii*, Macl., and other species of *Dædrosis*. The following is a table of the species known:—

1	12	Body not pedunculate.	
2	8	Sparsely pilose, at least on elytra; prothorax very convex.	
3	7	Elytra deeply sulcate, intervals raised; antennæ and legs dark.	
4	6	Lateral margins of prothorax crenulate, disc coarsely punctate.	
5		Colour bronze, elytral intervals sharp and rugulose	<i>crenato-striata</i> , Bates
6		Colour black, elytral intervals flatter and plain	<i>ambigua</i> , Bates
7		Colour bronze, lateral margins of prothorax entire, disc finely punctate	<i>monticola</i> , Blackb.
8		Elytra finely striate-punctate, intervals quite flat, antennæ red ...	<i>victoriæ</i> , Blackb.
9		Body glabrous; prothorax subcordate and more depressed	<i>angulata</i> , n. sp.
10	12	Strongly pilose on elytra.	
11		Elytra sulcate, intervals raised ...	<i>pygmæa</i> , Haag-Rut.
12		Elytra striate-punctate, intervals flat	<i>hirsuta</i> , Cart.
13	15	Body pedunculate.	
14		Elytra glabrous, deeply striate, intervals raised	<i>mastersii</i> , Macl.
15		Elytra pilose, lightly striate, intervals flat	<i>apiformis</i> , n. sp.

Bates seems to have been doubtful as to the distinction of *ambigua* from *crenato-striata*. I have, I think, both sexes of each, and consider them clearly distinct. The former I have from the Blue Mountains, the latter from Sydney, Illawarra, and the Blue Mountains. *D. monticola*, Blackb., is also common round Medlow and Blackheath. Specimens from Eden (New South Wales) and Jamieson (Victoria) are also very close to this species. *D. victoriæ*, Blackb., I have from Dandenong, Buffalo Mountains, and Wanden (Victoria). I have also a specimen from Cairns (Northern Queensland), which varies only slightly from this specimen in its somewhat coarser sculpture, and may be termed var. *cairnsi*. *D. pygmæa*, Haag.-Rut., is common in the Illawarra and coastal district of New South Wales. Mr. Cox has taken it in numbers under seaweed and shore refuse at Lady Robinson Beach, near Sydney. *D. mastersii*, Macl., my single specimen, compared with type (from Gayndah), was taken by Mr. Lea at Forest Reefs, New South Wales.

DÆDROSIS ANGULATA, n. sp.

Narrowly ovate; brilliant bronze, glabrous; antennæ and tibiæ red; labrum, palpi, and tarsi light castaneous.

Head very coarsely punctate, epistomal suture arcuate and sulcate, eyes very prominent; antennæ rather short, joint 3 little longer than 4, 4-8 somewhat oblong, 9-10 subtriangular, not rounded, 11 shortly ovate and much less enlarged than is usual in the genus. *Prothorax* subcordate, widest at middle, wider at apex than at base, truncate at both; anterior angles obtuse, very slightly rounded at tips; sides entire, rounded anteriorly, sinuately converging behind; posterior angles defined and subrectangular, narrowly bordered throughout; lateral margins more or less explanate, but coarsely punctate like the disc; the lateral border evident from above, disc coarsely punctate with a few smooth spaces and two large foveæ at middle, and no indication of a middle line. *Scutellum* small, rounded—a triangular depression on elytra behind it. *Elytra* ovate, wider than prothorax at base, shoulders widely rounded, striate-punctate, intervals quite flat, each with a single line of punctures; striæ not deep, seriate punctures round and close. *Prosternum* coarsely and sparsely, abdomen closely and finely, punctate. *Dimensions*—7 (*vix.*) × 3 mm.

Hab.—Victoria (the author).

A specimen was taken in Christmas, 1912, by myself, either at Warburton or Flinders. While allied to *D. victoriæ*, Blackb., in its elytral sculpture, it differs from all the other members of the genus in (1) its flatter and more cordate prothorax, more explanate sides and defined posterior angles, (2) the marked antennal differences, the apical joint much less enlarged, and (3) glabrous surface.

DÆDROSIS APIFORMIS, n. sp.

Subpedunculate, oval; bronze, antennæ brown, apex of femora, tibiæ, tarsi, and oral organs pale-red, whole surface more or less pilose.

Head coarsely rugose-punctate, with some smooth impressions on forehead; clypeal suture straight and deep; antennæ stout and rope-like, joint 3 as long as 4-5 combined, 4-10 moniliform, 9-10 larger than preceding, 11 as long as the three preceding combined, and much wider, ovoid. *Prothorax* about as wide as long (2 × 2 mm.), subtruncate at apex and base; anterior angles subrectangular and slightly produced, wider at apex than at base, sides well rounded, narrowed behind; posterior angles obsolete (very widely rounded), sides narrowly margined—not channelled—the margin evident near the front angles but diminishing and deflexed behind; disc

irregularly punctate-setose; the punctures round and sparse in the centre, close and more coarse towards the sides, each puncture giving rise to an upright hair; a large shallow foveate depression near the centre of base. *Scutellum* not evident. *Elytra* obovate and transversely convex, nearly twice as long as the prothorax, widest behind the middle, shoulders obsolete, with narrow margin not visible from above; with rows of round punctures placed in shallow striæ, intervals quite flat and irregularly dotted with punctures as large as those in the rows—all punctures setiferous. Under-side closely and coarsely punctate, of the same copper-bronze colour as above, with a pilose clothing of whitish hairs showing most at sides and apex. Femora swollen; tibiæ with two minute spines at apex, front tibiæ slightly curved. *Dimensions*— 6×2 mm.

Hab.—New South Wales: Dapto (Illawarra district) (the author), Blue Mountains (Dr. E. W. Ferguson).

Compared with the other more strongly pilose species *D. pygmaeus*, Haag.-Rut, and *D. hirsuta*, Cart., the former has its elytra "sulcate," with intervals raised, its prothorax subparallel, *inter alia*; while the latter is larger, darker, with concolorous legs, the prothorax is less convex with much coarser and closer punctures, the elytral striæ are deeper, and the seriate punctures larger. In my description of *hirsuta* I stated its clothing to be "black"; it is really a fawn colour above, paler below, but much darker than in *D. apiformis*. (N.B.—All the species are more or less pilose, but with the exception of the three mentioned above the hairs are few and difficult to see, except on the head and, to some extent, on the thorax.) Type in author's collection.

LICINOMA, Pasc.

There is little doubt but that *Adelium commodum*, Pasc., together with its two allies, *A. tasmanicum*, Champ., and *A. nodulosum*, Champ., should be included under *Licinoma*. The front angles of prothorax in *commodum* are very faintly emarginate, while the base angles are also very marked, not really dentate, but accentuated by the oblique basal foveæ noticed by Champion in the description of *tasmanicum*, but not included in Pascoe's very brief diagnosis; also the tarsi of *commodum* are rather pilose than tomentose, and the facies is wholly that of *Licinoma*. I have not seen specimens of *tasmanicum* and *nodulosum*, but their descriptions show their very strong relationship with *A. commodum*, Pasc. *A. nodulosum*, Champ., seems only a variety of *A. tasmanicum*, Champ., the nodulose intervals at apex of elytra being common in variations of certain *Adelia*. I have two specimens of *L. commoda*, Pasc.,

taken by myself at Mount Macedon, Victoria (the original *habitat* of *L. nitida*, Pasc.), which I cannot distinguish from the Tasmanian specimens, but which are quite unlike the type of *L. nitida*, Pasc.

L. SYLVICOLA, Blackb.

The description of this is very meagre and unsatisfactory ; if I have identified this correctly, the intervals of the elytra are distinctly unequal, the third and fifth interval being wider than the rest. It appears to be widely distributed in New South Wales, and is variable in size. A species commonly taken by the author at Medlow (Blue Mountains) differs from *L. sylvicola* in its slighter puncturation of head and thorax, the latter with faint, sometimes obsolete, impressed middle line and foveæ. I cannot at present see any reason for giving it specific rank, but it should be known by a varietal name, for which I propose *L. montium*.

L. (CARDIOTHORAX) ANGUSTICOLLIS, Cart.

This species should be referred to *Licinoma*, though its elytral sculpture is like that of many of the smaller *Cardiothoraces*. The prothorax is entirely that of a *Licinoma*.

The following table may help to identify the species:—

LICINOMA.

1	6	Colour black, or nearly so; legs dark.	
2	5	Prothorax slightly rounded.	
3		Prothorax with two large foveæ and impressed middle line, intervals 3	
		5 of elytra wider than others ...	<i>sylvicola</i> , Blackb.
4		Prothorax with middle line and foveæ faint and obsolete ...	var. <i>montium</i> , n. var.
5		Smaller, more nitid than 3, without middle line or foveæ; elytral intervals equal ...	<i>nitidissima</i> , Lea
6		Prothorax semi-circularly widened, legs red ...	<i>cyclocollis</i> , n. sp.
7	22	Colour bronze or coppery.	
8	19	Size larger, 8-12 mm. long.	
9	11	Elytral intervals raised.	
10		Elytra strongly sulcate, form very narrow ...	<i>elata</i> , Pasc.
11		Elytra moderately sulcate, larger and much wider than 10 ...	<i>angusticollis</i> , Cart.
12	23	Elytra striate-punctate.	
13		Intervals subconvex ...	<i>violacea</i> , Macl.
14	22	Intervals quite flat.	
15	19	Angles feebly emarginate, base obliquely foveate at sides.	
16		Elytral striæ defined, intervals 3-5-7-9 setulose ...	<i>commoda</i> , Pasc.

17	19	Elytral striæ subobsolete, intervals 2-4-6-8 setulose.	
18		Elytral intervals plain at apex (6) ...	<i>tasmanica</i> , Champ.
19		Elytral intervals nodulose at apex (6)	<i>nodulosa</i> , Champ.
20	23	Size smaller, 7-8 mm. long; angles of prothorax not at all emarginate.	.
21		Prothorax feebly rounded at sides, legs dark-reddish	<i>nitida</i> , Pasc.
22		Prothorax strongly rounded at sides, legs testaceous	<i>pallipes</i> , Blackb.
23		Colour chestnut-brown, under-side red	<i>gilesi</i> , n. sp.

LICINOMA CYCLOCOLLIS, n. sp.

Ovate; nitid black; labrum, antennæ, palpi, and legs red.

Head—Epistoma rounded in front, with a straight deep limiting sulcus behind; concave in front of eyes, the concavity with stronger puncturation than the rest of head; eyes subrotundate and prominent; antennæ with joint 3 as long as 1-2 combined, 4-7 obconic, 8-10 triangular, 11 much larger than preceding; widely ovate. *Prothorax* slightly wider than long, widest at the middle, somewhat circular, all angles widely rounded, subtruncate at base and apex, sides evenly and widely rounded without sinuation, lateral border narrow, disc very minutely punctate. *Scutellum* semi-circular. *Elytra* oval, striate-punctate, with eleven striæ containing punctures evenly placed (smaller and less closely placed than in *L. pallipes*, Blackb., larger than in *L. nitidissimus*, Lea), the tenth interval terminating some distance behind the shoulder; intervals quite flat on disc, convex at the sides; under-surface almost smooth and very nitid; femora swollen, tibiæ and tarsi slender. *Dimensions*—6·5-8 × 2·5-3 mm.

Hab.—Northern Queensland: Kuranda (F. Dodd and A. M. Lea).

A specimen (female?) sent me by Mr. Dodd, also a mutilated specimen amongst Mr. Lea's captures at Kuranda, differ from all described species in its widely- and evenly-rounded prothorax, with other differences to distinguish it from *nitidissima*, its nearest ally. Type in author's collection. In Mr. Lea's description of "*nitidissima*" he gives the prothorax as "twice as wide as long." I have several specimens, one determined by the author himself. In all of these the length:width is 2:3 as nearly as possible.

LICINOMA GILESI, n. sp.

Depressed; nitid dark castaneous above; under-side, legs, antennæ, and oral organs pale red.

(6) Species unknown to the author.

Head—Epistoma straight and tumid in front, oblique at sides; suture straight; forehead triangularly concave and declivous, the depressed portion rather strongly punctate, a transverse impressed line between the eyes; the latter large (much larger than in *L. pallipes*, Blackb.); antennæ extending to the base of prothorax, joint 3 slightly longer than 4, 4-10 cupuliform, gradually widening to the apex, 11 oval longer and wider than 10. *Prothorax* transverse and rather flat, truncate at apex and base, anterior angles widely rounded, posterior obtuse and defined, sides evenly rounded without sinuation, very narrowly bordered and channelled, base also bordered narrowly; disc without foveæ or middle line, and (under a strong lens) seen to be finely punctate. *Elytra* ovate, wider than prothorax at base; shoulders rather squarely rounded, the epipleural fold, seen from above, bluntly rounded at apex; striate-punctate, with ten striæ on each elytron, the striæ well impressed and containing close half-hidden punctures (the last on extreme margin containing larger punctures); intervals flat (or slightly convex laterally), with faint transverse striae; body beneath and legs smooth and impunctate; femora swollen; tibiæ slightly curved; tarsi clothed beneath with short yellow hair; front tarsi enlarged. *Dimensions*— $9\frac{1}{2} \times 3\frac{1}{4}$ mm.

Hab.—Western Australia: Poreongereny (?) (H. Giles).

A single male specimen sent some years ago by Mr. Giles (with an indistinct pencil locality label) is evidently distinct from all described species, though nearest *L. pallipes*, Blackb. The last has its under-side black, or dark-bronze, with a much more convex thorax, and the elytral striæ less deep. Type in author's collection.

MACROPERAS (n. gen. ADELIINARUM).

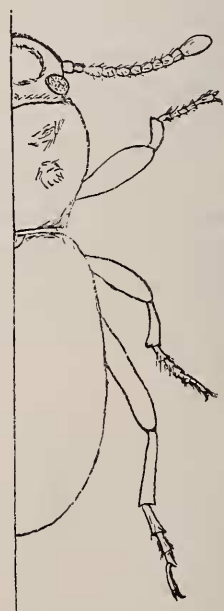
Labrum very prominent; palpi long, the terminal joint of both labial and maxillary securiform; mentum subtrapezoidal with the anterior margin convex; mandibles bifid at apex; antennæ stout and long, extending beyond the base of prothorax, not at all flattened, joint 3 about one and a half times as long as 4, 3-5 obconic, 6-7 oval, 8-10 cup-shaped and transverse, successively wider, 11 massive, elongate-ovoid, as long as the three preceding, bluntly rounded at the apex. Eyes moderate, transverse impinged on by the antennary orbit; epistoma arcuate, concave in front; suture straight without transverse branches; forehead flat; head and pronotum rugose-granulose. *Prothorax* with apex bisinuate, anterior angles little advanced, margins subcrenate, apex truncate. *Scutellum* small and triangular. *Elytra* substriate-punctate with some of

its intervals irregularly connected, forming series of longitudinal reticulations unequal in size. Prosternum and femora closely granulose. *Abdomen* rugose-punctate. Epipleuræ wide anteriorly, its fold forming an angle behind the shoulder, much narrowed halfway. Tarsi and inside of tibiæ clothed with yellow hair, a short spine just perceptible at apex of tibiæ, intercoxal process wide and nearly square.

Near *Dædrosia*, but with its final antennal joint even more enlarged, a feature which distinguishes it from any of the Australian *Tenebrionidae* known to me. In general facies, not unlike some of the rougher, opaque species of *Cardiothorax* (e.g., *C. egerius*, Pasc., *C. mimus*, Cart.).

MACROPERAS ANTENNALIS, n. sp.

Narrow elongate-elliptic; opaque-brown, antennæ and legs reddish; labrum, palpi, and tarsi pale-red. *Head* with labrum and epistoma elongate, the latter straightly narrowing from the canthus to the front, and concavely excised in front; canthus scarcely raised or prominent. *Prothorax* sub-cordate, about as wide as long (4 × 4 mm.); apex bisinuate (incurved at the middle and near the angles); anterior angles acute and deflexed; sides widely rounded on anterior half, then after a single crenulation sinuately narrowed to base; posterior angles acute and deflexed; sides and base with narrow raised border without channel; disc with rather wide central depression and two shallow foveate depressions on each side, the whole coarsely and closely rugose. *Elytra* considerably wider than the prothorax at base, narrowly ovate or subparallel, faintly sinuate towards apex; irregularly sculptured, the central part more or less striate-punctate, with about five lines of fairly large punctures, the intervals raised and closely and finely punctate; the lateral half with irregular reticulation, the two extreme rows forming elongate foveæ. Tarsi very hairy, the posterior with basal and claw joint of nearly equal length. *Dimensions*— $6\frac{1}{2} \times 4$ mm.



MACROPERAS
ANTENNALIS, n. sp.

Hab.—New South Wales: Moruya (G. W. Chessman).

A single specimen, probably female, is very different from any other genus, though allied to *Dædrosia* and *Otrintus*, with a unique sculpture difficult to describe. The

structure of the epipleural fold is remarkable, forming an obtuse angle considerably behind the usual position of the humerus, behind which the elytra appear angulately narrowed. The single pronounced lateral crenulation of the prothorax may be individual. My specimen is the only one I have seen. Type in author's collection.

The numbers in the second column imply how far to include the specified character. Thus 1-33 include all "species with sexual characters strongly marked in femora or tibiæ."

TABLE OF CARDIOTHORAX.

1	33	Species with sexual characters strongly marked in femora or tibiæ.	
2	16	Hind femora armed in male.	
3	5	Colour opaque-black.	
4		Size smaller, 16½ mm. long; elytral intervals unequal ...	<i>armipes</i> , Bates
5		Size larger, 18-19 mm. long; elytral intervals equal ...	<i>opacicollis</i> , Macl.
6	9	Colour bright-bronze, all femora armed, intermediate and hind femora dentate in male.	
7		Posterior angles of prothorax not lobed or dentate ...	<i>femoratus</i> , Bates
8		Posterior angles of prothorax slightly dentate ...	var. <i>subdentatus</i> , Cart.
9		Posterior angles of prothorax strongly dentate ...	<i>dorrigoensis</i> , Cart.
10	16	Front femora only toothed within in the male (sub-obsolete in <i>curvipes</i>).	
11	15	Colour black-nitid.	
12	14	Species wide, base of prothorax evenly arcuate.	
13		Posterior tibiæ very long and straight in male ...	<i>longipes</i> , Bates
14		Posterior tibiæ not very long and strongly incurved in male	<i>curvipes</i> , Bates
15		Species much narrower, base of prothorax angularly emarginate ...	<i>errans</i> , Pasc.
16		Colour dark-bronze, posterior tibiæ tuberculose ...	<i>tibialis</i> , Cart.
17	33	Posterior tibiæ strongly dilated and hollowed within in male.	
18	32	Posterior angles of prothorax more or less dentate.	
19	29	Colour black, or nearly so.	
20	26	Elytra more or less regularly sulcate, intervals not costate.	
21	23	Form subcylindric and parallel, prothorax not widely rounded.	
22		Pronotum nearly flat, posterior angles less prominent ...	<i>caperatus</i> , Pasc.

- 23 | Pronotum convex, posterior
angles more prominent var. *lachlanensis*, Cart.
- 24 29 | Form less elongate, sides of
prothorax widely rounded.
- 25 | Foliate margins separated from
disc by deep sulcation *walckenæri*, Hope
- 26 | Foliate margins not separated
from disc by deep sulcation *acutangulus*, Bates
- 27 29 | Elytra with alternate intervals
costate and unequal.
- 28 | Anterior margin of epistoma
notched in middle *grandis*, Bates
- 29 | Anterior margin of epistoma
produced in middle *castelnaudi*, Pasc.
- 30 32 | Colour bronze.
- 31 | Colour darker, foliate margins
separated from disc by sulcus,
posterior tooth prominent *æripennis*, Blackb.
- 32 | Colour bright violet - bronze,
foliate margins not sulcate,
posterior tooth small *laticollis*, Cart.
- 33 | Posterior angles of prothorax
not or subobsoletely dentate,
colour black *brevicollis*, Redt.
- 34 63 | Sexual characters not strongly
marked in femora or tibiæ.
- 35 65 | Species with nitid surface.
- 36 59 | Posterior angles of prothorax
forming a distinct tooth or
lobe.
- 37 40 | Colour black, posterior tooth of
prothorax large.
- (a) 38 | Anterior angles rounded, sides
widely rounded and sinuate
behind *cordicollis*, Pasc.
- 39 | Anterior angles sharply pro-
duced, sides nearly straight *encephalus*, Pasc.
- (b) 40 | Posterior tooth much smaller,
sides widely and evenly
rounded *rotundicollis*, Cart.
- 41 | Colour blue, foliate margins
narrow *cæruleo-niger*, Cart.
- 42 | Bicolourous, head and thorax
black, elytra golden-bronze *æneus*, Bates
- 43 59 | Colour bronze.
- (c) 44 | Posterior tooth of prothorax
produced backwards into an
elongate lobe *distinctus*, Bates
- 45 59 | Posterior tooth of prothorax
normal.
- 46 | Size large, 20 mm. long; elytral
intervals subcostate and very
unequal in width *howitti*, Pasc.
- 47 59 | Size smaller, not more than
15 mm. long.
- 48 | Foliate margins narrow, sides
of prothorax nearly straight *connexus*, Haag-Rut.

- 49 59 Foliate margins wide, sides widely rounded.
- 50 Under-side of legs cyaneous and purple *iridipes*, Cart.
- 51 59 Under-side of legs concolorous with upper-surface.
- 52 59 Size larger, 13½-15 mm. long.
- 53 Fifth interval of elytra wider than the rest *aureus*, Cart.
- 54 59 Elytral intervals equal.
- 55 58 Posterior tooth of prothorax very small, disc nearly smooth.
- 56 Clypeus with semi-circular excision in the middle *clypeatus*, n. sp.
- 57 Clypeus produced in middle, shoulders distinct *ericollis*, Pasc.
- 58 Clypeus normal, shoulders obsolete *captiosus*, Bates
- 59 Posterior tooth of prothorax large, epipleuræ smooth *australis*, Cart.
- 60 Size smaller, 10 mm. long; epipleuræ punctate *pygmæus*, Cart.
- 61 68 Posterior angles not forming distinct tooth or lobe.
- 62 Each elytron with 10 striæ, distinctly punctate [Cart. *punctato-striatus*,
- 63 Each elytron with one deep sulcus and four or five vague striæ *bisulcatus*, Cart.
- 64 Elytra normally sulcate.
- 65 Foliate margins wide, alternate elytral intervals wider than rest *mastersi*, Maci.
simulans, Haag-Rut.
chalceus, Bates
angulatus, Bates
- (?)
- 66 68 Foliate margins narrow, elytral intervals equal.
- 67 Clypeus produced in middle, base of prothorax angulate-emarginate *politicollis*, Bates
(*Otrintus*) *fergusoni*, [Cart.
- 68 Clypeus normal, base of prothorax sinuately truncate *crassicornis*, Bates
- 69 86 Species with opaque surface.
- 70 72 Hind angles of prothorax with elongate lobe, pointing backwards.
- 71 Length, 16-19 mm.; elytra strongly costate and punctate *egerius*, Pasc.
- 72 Length, 12-14 mm.; elytral costæ less elevated, punctures stronger *mimus*, Cart.
- 73 85 Prothorax deeply emarginate at apex, foliate sides widely reflexed.
- 74 80 Species a little shining.

75	77	Sides of prothorax crenulate, posterior tooth truncate at apex.	
76		Elytra with four carinate costæ on each	<i>carinatus</i> , Cart.
77		Elytral intervals unequally raised and widely convex	<i>crenulicollis</i> , Bates
78	80	Sides of prothorax entire, posterior tooth depressed and acute.	
(d)	79	Elytral intervals equal and regularly convex	<i>humeralis</i> , Bates
	80	Elytral intervals unequal, alternately costiform	<i>haagi</i> , Bates
	81	89 Species quite opaque, femora slender.	
	82	Sides of prothorax with deep excision near hind angle ...	[Waterh. <i>quadridentatus</i> ,
	83	89 Sides of prothorax entire, elytra with undulate ridges.	
	84	86 Posterior angles of prothorax not lobate or dentate.	
	85	Elytra more regularly punctate-striate, alternate intervals of elytra wider than rest	<i>macleayi</i> , Pasc.
	86	All elytral intervals equally but less raised	<i>aratus</i> , Pasc.
	87	89 Posterior angles of prothorax sharply dentate.	
	88	Foliate margins of prothorax oblique, elytral sculpture as in <i>aratus</i>	<i>undulatus</i> , n. sp.
	89	Foliate margins of prothorax horizontal, elytral ridges wide	<i>rugosus</i> , Cart.

NOTES.

(a) *C. cordicollis*, Pasc. I have a blue variety, from South Queensland.

(b) *C. rotundicollis*, Cart. The type is black, but I have bronze varieties from Kuranda.

(c) *C. distinctus*, Bates. Five specimens lately taken by T. G. Sloane and the author between Wingham and Comboyne (Manning River district, N.S.W.).

(d) *C. humeralis*, Bates, whose exact *habitat* has not been previously recorded, has been sent by Mr. Cheesman from Moruya, New South Wales.

C. angusticollis, Cart., should be referred to *Licinoma*.

The following synonymy has not been previously noted, and is, in my opinion, correct:—

C. angulatus, Bates = *C. chaldeus*, Bates = *C. mastersi*, Macl. The distinctions made by the author in the

first two are very slight, while the descriptions of both will fit Macleay's species. The author's identification of *chalceus* (p. 238 of monograph) was a mistake.

C. lachlanensis, Cart. = var. of *caperatus*, Pasc.

Otrintus fergusonii, Cart. = *C. politicollis*, Bates.

CARDIOTHORAX CLYPEATUS, n. sp.

Elongate-ovate; violet-bronze above, black beneath, antennæ piceous, apex of tibiæ and under-side of tarsi clothed with golden tomentum.

Head—Epistoma oblique at sides, semi-circularly excised in the middle; suture straight, and, with the usual frontal impression, sharply defined and straight at sides, with a wide central depression; antennæ stout, scarcely reaching base of prothorax, punctate and bearing short golden hairs, joint 3 shorter than 4-5 combined, 5-10 gradually wider and rounder, 11 ovate-acuminate. *Prothorax*, 4 × 5 (*vix.*) mm., widest in front of middle, apex arcuate, front angles rounded and slightly produced, sides widened and rounded anteriorly, slightly sinuately converging behind; posterior angles acute, deflected, and slightly but evidently dentate; base widely angulate in the middle; basal and apical borders narrow, lateral border wide and reflexed; foliate margins moderately wide, obsolete at base, bearing two large punctures (not setiferous); disc apparently smooth with sharply impressed medial line, cutting the base but not the apical border. *Scutellum*, subsemi-circular, smooth, with triangular depression behind. *Elytra* little wider than and two and a half times as long as prothorax; shoulders subobsolete, or only represented by a narrow arcuate-epipleural fold; striate with nine striæ on each, the lateral two or three but faintly impressed; intervals nearly flat (except at apex and sides), smooth and of equal width. *Epipleuræ* and *abdomen* smooth, prosternum transversely striolate; femora without sexual distinctions; tibiæ, especially of male, triangularly-emarginate at apex with two sharp spines, the interior longer and stouter. *Dimensions*—16 × 5 mm.

Hab.—New South Wales: Guyra (the author).

Some half-dozen specimens were taken by the author in January, 1912, and were at first determined (and possibly given away) as *C. politicollis*, Bates. On observing the differences, especially in the clypeus, between two species, I sent one of each to the British Museum for comparison with the type of *politicollis*. Mr. Blair has very courteously complied and replies, the "smaller with *very* narrow margins to prothorax and the clypeus produced in the middle agrees with

Bates' unique type of *politicollis*, whereas the other is new; we have no other specimen with an excised clypeus like that."

The following comparison will differentiate the two species:—

<i>C. clypeatus.</i>	<i>C. politicollis.</i>
<i>Clypeus</i> circularly excised in middle.	Produced in middle.
<i>Foliate margins of prothorax</i> wider.	Very narrow.
<i>Posterior angles</i> distinctly dentate and acute.	Obtuse, not dentate.
<i>Antennæ</i> stouter, apical joints rounder.	Slenderer, apical joints not rounded.

Under a Zeiss binocular microscope the prothorax of both species is seen to be punctate, but the punctures are larger and more distinct in *clypeatus*.

A re-examination of *Otrintus fergusonii*, Cart., compels me to confess that there is no specific distinction between it and *C. politicollis*, Bates, the very narrow foliate margins being quite obsolete and the enlarged apex of tibiæ in the male type is, I consider, individual variation. The name *O. fergusonii* must therefore be sunk.

CARDIOTHORAX UNDULATUS, n. sp.

Opaque brownish-black above, legs and abdomen nitid black, antennæ and tarsi piceous.

Head smooth, with front of epistoma evenly curved; frontal impression circular; antennæ stout, submoniliform, joint 3 little longer than 4, 11 pointed at apex. *Prothorax*, 4 × 5 (*vix.*) mm., arcuate-emarginate at apex; anterior angles prominent and acutely rounded; sides strongly and arcuately widening to middle, then more gradually converging and sharply sinuate at hind angles, these acute, dentate, deflexed and outwardly directed; base coarctate; disc impunctate with four equal-spaced foveæ, two on each side of the middle line (sometimes vaguely connected by a longitudinal depression); medial line clearly impressed throughout; foliate margins wide on apical half, narrowed at base, obliquely raised, and separated from disc by a nearly straight shallow groove; extreme border narrowly raised on sides and apex, strongly raised at base. *Scutellum* triangular depressed. *Elytra* ovate, wider than prothorax at base, shoulders raised and prominent; with about eight undulate ridges, irregularly connected, this reticulation especially marked towards the sides, with a series of large foveæ closely placed on the vertical sides between the lateral (and most prominent) of the ridges and the epipleural

fold; epipleuræ smooth, and, with the prosternum and submentum, opaque; metasternum, legs, and *abdomen* very nitid and impunctate; tibiæ and femora unarmed, the former moderately enlarged at apex, hind tibiæ of male slightly curved. *Dimensions*—13-15 × 4.5-5 mm.

Hab.—New South Wales: Comboyne.

Twenty-eight specimens collected by Mr. T. G. Sloane and the author in a recent visit to this interesting volcanic plateau, July, 1914. No marked sexual characters are present, as in the allied species. In form and size like *C. mimus*, Cart., with elytral sculpture like *C. aratus*, Pasc., it is easily separated from the former by the sharply-dentate hind angles of prothorax, which in *C. mimus* is an elongate process extending straightly backwards. *C. aratus*, Pasc., has a more pronounced cordate prothorax, with wider foliation and undentate hind angles. All the species are coated more or less with the adhesive red soil of the district, difficult to remove. This gives a lighter shade than is actually true of the upper surface. Type in author's collection.

NOTE.—On the escarpment of the plateau between Wingham and Comboyne we captured five specimens of *C. distinctus*, Bates, thus establishing the first definite record of the *habitat* of this species. Hitherto the only specimens seen by the author are (1) the type in the British Museum, labelled "Australia," and (2) some specimens in the Paris Museum of Natural History identified by him as *distinctus*. M. Lesne very courteously gave me two of these, which are now before me, one labelled "Tasmanie," the other "Australie." So far no species of *Cardiothorax* has been found in Tasmania, and this label is evidently a mistake.

ADELIIUM IRREGULARE, n. sp.

Elongate-ovate, depressed; nitid bronze-black, antennæ and tarsi piceous red, the latter clothed beneath with tomentum of a similar dark colour.

Head coarsely punctate, more rugosely and sparsely on the forehead, epistoma more closely and regularly; antennæ comparatively slender, extending beyond the base of prothorax, apical joints very little enlarged, joint 3 longer than 4-5 combined, 4-10 subconic, successively but slightly enlarged, 11 elongate-ovate. *Prothorax*, 4 (*vix.*) × 6 mm., base and apex of about equal width, widest behind middle, bisinuate at apex, truncate at base, anterior angles obtuse and lightly produced; sides widely rounded, more abruptly converging behind to the widely-obtuse posterior angles; basal and apical border narrow; lateral border wider without differentiated foliation of

margin; disc coarsely and rather closely punctate with some smooth vermiculations, and irregular foveæ, the largest one on each side. *Scutellum* triangular and punctate. *Elytra* ovate and rather flat, wider than prothorax at base, shoulders rounded, apex rather sharp, narrowly margined, subseriate, reticulate-foveate, the foveæ irregular in size and shape, but in general elongate and close, in a more or less seriate arrangement; intervals finely punctate, forming an irregular network. Epipleuræ coarsely and sparsely punctate, apical segment of abdomen closely and finely so, rest of under-side smooth. *Dimensions*— $15\frac{1}{2} \times 6$ mm.

Hab.—South-Western Australia: Bridgetown or Manjemup.

In collecting a large number of *Adelia* in Western Australia (December, 1913), at Albany, Manjemup, Bridgetown, Busselton, Bunbury, Harvey, Perth, Gin-Gin, I find the species very difficult to separate, the variations on one pattern being very great. The two smaller species, *scytalicum*, Pasc. (from Perth district) and *vicarium*, Pasc. = *forticorne*, Geb. (from Albany), are easily distinguished. Among the larger specimens I find two (males ?) of the above evidently undescribed species, which can readily be separated from *lindense*, Blackb., and *breviusculum*, Geb., by the large foveate sculpture of the elytra, the dark colour, and the obscurely-coloured clothing of the tarsi.

The described species from Western Australia may be tabulated as follows:—

1	Elytra subseriate-foveate, intervals reticulate	<i>irregularis</i> , n. sp.
2-8	Elytra seriate-punctate, punctures irregular in size.	
3-5	Size larger, surface dull bronze.	
4	Elongate-ovate, border of prothorax thick	var. <i>lindense</i> , Blackb.
5	Shorter and broader than 4, border of prothorax thin	(7) <i>breviusculum</i> , Geb.
6-8	Size smaller, surface dark nitid-bronze.	
7	Prothorax nearly smooth, antennæ shorter and finer than in 8	<i>scytalicum</i> , Pasc.
8	Prothorax coarsely punctate, antennæ long and thick	<i>vicarium</i> , Pasc. <i>forticorne</i> , Geb.
9-12	Elytra striate-punctate.	
10	Size large, colour black, seriate punctures large and equal, intervals pustulose at apex	<i>occidentale</i> , Blackb.
11	Size medium, colour bronze, seriate punctures unequal	<i>simplex</i> , Blackb. <i>tralaticium</i> , Geb.

(7) Species not clearly identified by author.

- 12 | Size small, colour bright-coppery,
 | elytral intervals regular, not pus-
 | tulose at apex, seriate punctures
 | equal *cuprescens*, Cart.

Synonymy of species of *Adelium* not hitherto recorded:—

A. angulatum, Blackb. = *A. angulicolle*, Cast. A co-type of the former shows only slight variation of this common species.

A. victoriae, Blackb. = *A. pustulosum*, Blackb. var. The variations of this common species are endless, and may well include the slight distinctions made by the author.

(?) *A. tralaticium*, Geb. = *A. simplex*, Blackb.

After an examination of many specimens from the Nullabor Plains, I cannot but believe this synonymy to be correct. There is a good deal of variation in size, and brightness of colour, and the males, as in other species (*e.g.*, *A. pustulosum*, Blackb.), sometimes have more sharply-defined posterior angles.

ADELIUM ORPHANUM, Pasc.

I have taken this species at Warburton, near the traditional "Yankee Jim's Creek." It should be referred to *Seirotana*, having its prothorax closely applied to the elytra.

SEIROTRANA FOLIATA, n. sp.

Oblong-oval; brownish-black; under-side and legs dull-black; labrum, tarsi, basal joints of antennæ, and the clothing of the legs, red.

Head—Epistoma smooth, front finely granulose, the former clearly separated from the latter by deep arcuate sulcus, produced backwards to the eyes; antennæ scarcely reaching base of prothorax, joint 3 shorter than 4-5 combined, 7-10 moniliform, 10 transverse, 11 as wide as 10 and twice as long, oval. *Prothorax*, 3 × 4.6 mm., little wider at base than at apex, widest in the middle; apex straight in the middle, with the anterior angles strongly emarginate, reflexed, and acute; sides widely rounded and sinuate before the acute outwardly directed dentate posterior angles; foliate margins wide, obliquely reflexed, marked off from disc by wide depression; extreme border with a few subobsolete crenulations; base subtruncate; disc irregularly rugose, with a large foveate depression on each side near the foliation, these connected by a transverse depression, and a few punctures near the posterior angles. *Scutellum* small triangular. *Elytra* considerably wider than the prothorax at base, shoulders rounded; each elytron with six rows of large elongate punctures on disc, the

second, fourth, and sixth intervals costate, the first two costæ terminated on the apical declivity and having a ragged subcrenulate edge, tending to become nodulose and interrupted on apical half, the third costa with a zig-zag outline; the sides beyond this costa with four rows of deep, large foveate punctures. Prosternum coarsely, epipleuræ foveately, punctured; abdomen smooth, with short, sparse red hairs; anterior and middle tibiæ slightly curved. *Dimensions*—13 × 6 mm.

Hab.—Queensland: Duaringa (H. W. Brown).

A very distinct species, easily separated from its allies, *S. catenulata*, Bois., and *S. proxima*, Pasc., by its more convex form, the widely upturned flanks of prothorax, with its acute, produced front angles, and especially by the large elongate punctures on elytra (somewhat as in *Adelium plicigerum*, Pasc.) and the continuous costæ. Two specimens were given to Mr. W. du Boulay by Mr. Horace Brown, one of which was generously given to me (female). Type in author's collection.

SEIROTRANA SUBCANCELLATA, n. sp.

Oblong oval; bronzy-black, nitid above, nitid bronze beneath; oral organs, antennæ, and tarsi reddish-brown, the last clothed with golden pubescence.

Head and pronotum vermiculate-punctate, the punctures rounded and close, often confluent; the nitid vermiculate intervals less regular and longitudinal than in *S. catenulata*, Bois.; epistoma rounded and arcuate in front, its suture narrowly defined; antennæ reaching the base of prothorax, gradually enlarged outwards, joint 3 shorter than 4-5 combined, 4-10 subequal in length, obconic, 11 one and a half times longer than 10, ovate. *Prothorax*, 3 × 4.5 mm., widest in front of middle, base and apex of about equal width, bisinuate at apex; anterior angles slightly blunted and advanced, their margins reflexed; sides rounded anteriorly; posterior half gently converging to the undentate subrectangular posterior angles, these overlapping the elytra; foliate margins moderately wide and concave in front, becoming merged in the disc behind; lateral border raised and crenulate, the posterior crenulation forming a wide feeble sinuation; base slightly arcuate (advanced in the middle). *Scutellum* transverse, oval, and punctate. *Elytra* slightly wider than prothorax at base; shoulders obtusely angled; with ten rows of large punctures, the first six rows at basal half with reticulate intervals, the last four rows on sides not reticulate, the alternate intervals with straight catenulate costæ; prosternum, episterna, and epipleuræ very coarsely, the abdomen very minutely, punctate. *Dimensions*—13.5 × 5 mm.

Hab.—Queensland: Tambourine Mountain (the author).

A single specimen, taken in January, 1912, can easily be distinguished from *S. catenulata*, Bois., and *S. proxima*, Pasc., by (1) the undentate hind angles of prothorax, (2) colour intermediate between the dull-black of *catenulata* and the clear-bronze of *proxima*, (3) the catenulate costæ longer and less tuberculose than in *proxima*, wider and less elongate than in *catenulata*, and (4) the seriate punctures larger than in either of the above species with the basal half showing transverse reticulation. Type in author's collection.

EUTHERAMA (n. gen. ADELIINARUM).

Body oval; apterous. Labrum produced, showing membranous hinge; mandibles simple, acute at apex; eyes large, transverse, and kidney-shaped, separated by a space greater than the apparent diameter of one, and only lightly impinged upon by the antennal orbit; mentum oval, raised, and pedunculate; last joint of all palpi widely securiform; antennæ long, extending beyond the base of prothorax, lightly enlarged towards apex, joint 1 thick, cylindric, 2 subspherical, 3 as long as 4-5 combined, 4-10 gradually shorter and stouter obconic, 11 wider and shorter than 10, nearly round. *Prothorax* subquadrate, without marked angles, narrowly bordered throughout and rather flat on disc. *Elytra* convex, ovate, three times as long as and wider than the prothorax, without humeral angles; epipleuræ narrow. *Scutellum* triangular, a little rounded behind. *Prosternum* evenly convex; coxæ spherical, the procoxæ rather widely separated, posterior intercoxal process wide and truncate; mesosternum declivous, arched in front; metasternum short. *Legs* long, femora and tibiæ slender, the latter not enlarged at apex and bearing two short acute spines. Tibiæ and tarsi clothed with bristly hair; tarsi without tomentum, slender; the posterior tarsi with basal joint nearly as long as the rest combined, the claw-joint longer than the two preceding combined.

EUTHERAMA CYANEUM, n. sp.

Ovate, moderately convex; head and prothorax subopaque-black; elytra dark-blue, nitid; under-side, legs, and antennæ reddish; in one example the abdomen and femora metallic-blue.

Head with epistoma short and straight, its suture defined and straight; canthus oblique, and little raised; forehead with a large central fovea. *Prothorax* subquadrate and rather flat, apex slightly cordiform, sides lightly and evenly rounded, front angles widely rounded, base truncate, posterior angles

obtuse; surface like that of the head, confluent rugose-punctate, lateral border narrowly raised, apical and basal border clearly defined. *Scutellum* punctate. *Elytra* closely applied to prothorax, and of the same width of base, soon expanding without any defined shoulder, widest at middle; striate-punctate, each elytron with nine sulcate striæ, besides a short scutellary stria, containing large approximate punctures on the sides of the very convex intervals; these also finely punctate. *Prosternum* transversely rugose and punctate; episterna with large sparse punctures; abdomen nitid and minutely punctate. *Dimensions*— 12×3 mm.

Hab.—Northern Territory and North-Western Australia.

Three specimens in the South Australian Museum, labelled "Batchelor; N.T., 12-12-12." Three more in Mr. Lea's collection, labelled "N.W. Australia," and others in the Macleay Museum, belong to a genus near *Dystalica*. The combination of long and slightly enlarged antennæ, wide intercoxal spaces, thin and straight legs, nontomentose tarsi, is unusual. The elytral striæ may be termed sulci, while the punctures rather on the sides of the convex intervals give them a crenate appearance, the base of the sulci appearing smooth. Type, I. 3454, in South Australian Museum.

APPENDIX.

Through the courtesy of Mr. H. R. Blair, the following notes have been forwarded that will interest students of our *Tenebrionidæ*:—

Emeax sculpturatus, Pasc. = *Nyctoporis cristata*, Erich.
(From specimens in the British Museum. Pascoe's specimen is either erroneously labelled, or was an imported specimen.)

Ecripsis pubescens, Pasc. = *Ammidium ciliatum*, Erich.
(Pascoe had two specimens, and a third labelled "Tasmania," in the British Museum collection. The last proved to be one of a lot bought at Stewart's auction rooms, 1856, which came from various localities, including Tasmania, St. Vincent, Cape Verde. A confusion of locality labels is evident. *Ammidium*, by the way, is a perfectly good genus, and not to be confused with *Anemia* [Cat. Gebien].)

Arcothymus cænosus, Pasc. = *tristis*, Montr. (Pascoe had two specimens of *tristis* as well as the type of *cænosus*, so I do not know why he did not recognize their identity. It is probably another error of labelling, and the species should be removed from the Australian list.)